reviewed 12/13/91 SDS

Chevron U.S.A. Inc.
2410 Camino Ramon, San Ramon, California • Phone (415) 842-9500
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

91 AUG 7 AM 10:23

Marketing Operations

R. B. Bellinger
Manager, Operations
S. L. Patterson
Area, Manager, Operations
C. G. Trimbach
Manager, Engineering

August 19, 1991

Lowell:
I gave this case to Bill F. Carry

Mr. Larry Seto/Lowell Miller
Alameda County Health Agency
Hazmat Section
470 27th Street, Room 324
Oakland, California 94612

Re: Chevron Service Station #9-8139
16304 Foothill Boulevard
San Leandro, California 94578

Dear Mr. Seto,

Please find attached the most recent quarterly groundwater monitoring report for the above mentioned site. Chevron has seven on-site g.w. monitoring wells, one on-site g.w. extraction well and one off-site g.w. monitoring well. Depth-to-water is between 12.98 and 17.88 feet. The approximate groundwater flow direction is to the south at a gradient of 0.03 ft/ft.

The remediation system is currently up and running. Since this quarterly monitoring event has transpired two of the monitor wells MW-4 and MW-5 have been drilled out and developed as two additional extraction wells. All three wells are producing ground water at a rate of approximately 1.33 gallons-per-minute. We will forward a copy of all pertinent remediation system data we obtain to you.

I declare under penalty of perjury that the information contained in the attached report is true and correct, and that any recommended actions are appropriate under the current circumstances to the best of my knowledge.

Should you have any questions, please feel free to call me at (415) 842-9040.

Very Truly Yours,

Walter F. Posluszny Jr.
Environmental Engineer
Chevron U.S.A., Inc.

cc: Ms. Penny Silzer/Rich Hiett, RWQCB, 2101 Webster Street, Suite #500, Oakland, Ca.
File(MAC 9-8139R11)

T.L.H

QUARTERLY MONITORING REPORT
SECOND QUARTER 1991

CHEVRON SERVICE STATION NO. 9-8139
16304 Foothill Boulevard
San Leandro, California

July 1991

Prepared for

CHEVRON USA, INC.

Prepared by

BURLINGTON ENVIRONMENTAL INC.
CHEMPRO Division

950 B Gilman Street
Berkeley, California 94710

CHV149/297

BURLINGTON
ENVIRONMENTAL INC.
CHEMPRO Division

July 17, 1991
CHV149/297

Mr. Walt Posluszny
Chevron USA, Inc.
2410 Camino Ramon
San Ramon, CA 94583-0804

Re: **QUARTERLY MONITORING REPORT**
Second Quarter 1991
Chevron Service Station No. 9-8139
16304 Foothill Boulevard
San Leandro, California

Dear Mr. Posluszny:

Burlington Environmental, Inc. - *Chempro Division* (Burlington) is pleased to submit the following quarterly monitoring report for Chevron USA, Inc. (Chevron) Service Station No. 9-8139, located at 16304 Foothill Boulevard in San Leandro, California. The groundwater monitoring and sampling was conducted by Chempro on May 22, 1991.

MONITORING ACTIVITIES

The site is occupied by an operating service station located on Foothill Boulevard in southern San Leandro, California (see Figure 1). The service station is located approximately 250 feet east of Highway 580, and 6,000 feet south of Lake Chabot. There are currently seven groundwater monitoring wells located onsite and one located offsite (see Figure 2). In each well, the depth to groundwater and the presence and thickness of phase-separated hydrocarbons (PSH) were determined. Groundwater samples were collected and analyzed according to Chevron guidelines to determine the concentrations of total petroleum hydrocarbons as gasoline (TPH), and benzene, toluene, ethylbenzene and total xylenes (BTEX). The monitoring and sampling procedures are presented in Appendix A. Field data sheets are presented in Appendix B.

Superior Precision Analytical, Inc., located in San Francisco, California, performed the analyses. The analytical results, techniques, and detection limits are presented in Table 1.

RESULTS

The groundwater elevation in the monitoring wells beneath the site on May 22, 1991, ranged from 108.16 to 113.40 feet above mean sea level in the monitoring wells (see Table 2). A contour map of these data is presented in Figure 3. As shown on the contour map, the approximate groundwater flow direction is to the south, with an approximate gradient of 0.03 ft/ft.

950 'B' Gilman Street
Berkeley, CA 94710
(415) 524-9372 • FAX: (415) 524-7439

The results of the chemical analyses are presented in Table 1. PSH were detected in monitoring well MW-5 at a thickness of 0.33 feet during quarterly sampling on May 22, 1991. Figures 4 and 5 present isoconcentration contours for TPH and benzene, respectively. Chain-of-custody documentation and certified analytical results are presented in Appendix C.

The groundwater remediation system required modifications to accommodate the expected quantity of PSH. The system is scheduled to resume operation during the third quarter of 1991, pending regulatory approval.

Burlington appreciates the opportunity to provide Chevron with this information. Please feel free to contact us if we can provide further assistance.

Very truly yours,
BURLINGTON ENVIRONMENTAL INC.
CHEMPRO Division

Felicia A Rein
Environmental Scientist

David C. Tight
Site Remediation Manager

Attachments: Table 1 - Groundwater Analyses and Analytical Techniques
Table 2 - Groundwater Elevation Data

Figure 1 - Site Location Map
Figure 2 - Site Vicinity Map
Figure 3 - Groundwater Elevation Contour Map
Figure 4 - TPH Isooncentration Contours
Figure 5 - Benzene Isoconcentration Contours

Appendix A - Groundwater Sampling and Analysis Procedures
Appendix B - Water Sample Field Data Sheets
Appendix C - Chain-of-Custody Records and Certified Analytical Reports

FR/DT:pw:FAR\297QMR.DOC

Table 1
GROUNDWATER ANALYSES AND ANALYTICAL TECHNIQUES

Chevron Service Station No. 9-8139
16304 Foothill Blvd, San Leandro, California

WELL NUMBER	SAMPLE NO.	DATE SAMPLED	TPH Gasoline	TPH Diesel	TOTAL OIL & GREASE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	Pb	TOTAL Cr	METALS Cd	Zn	ETHYLENE DIBROMIDE
EPA Detection Method:			8015	8015	413	602*	602*	602*	602*	7420	7190	7130	7950	504
MW-1	WS-1SL	12/5/89	ND(<500)	ND(<1000)	ND(<5000)	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	ND(<500)	ND(<100)	20	20	ND(<.05)
	WS-1SL	5/24/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	1WSSL	9/6/90	ND(<50)	NA	NA	ND(<.5)	0.8	ND(<.5)	0.5	NA	NA	NA	NA	ND(<.05)
	WS13SL	11/29/90	ND(<50)	NA	NA	1	0.9	ND(<.5)	1	NA	NA	NA	NA	NA
	WS18SL	2/20/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS27SL	5/22/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
MW-2	WS-2SL	12/5/89	ND(<500)	ND(<1000)	ND(<5000)	ND(<.5)	ND(<.5)	ND(<.5)	0.9	ND(<500)	ND(<100)	ND(<10)	10	ND(<.05)
	WS-2SL	5/24/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	2WSSL	9/6/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	ND(<.05)
	WS10SL	11/29/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS19SL	2/20/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS26SL	5/22/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
MW-3	WS-3SL	12/5/89	24,000	NA	NA	2,400	1,800	360	2,600	NA	NA	NA	NA	ND(<.05)
DUP	WS-5SL	12/5/89	24,000	NA	ND(<5000)	2,500	1,900	390	2,600	ND(<500)	ND(<100)	ND(<10)	40	ND(<.05)
	WS-3SL	5/24/90	9,000	NA	NA	2,600	1,700	250	1,500	NA	NA	NA	NA	NA
DUP	WS-4SL	5/24/90	10,000	NA	NA	2,600	1,800	260	1,600	NA	NA	NA	NA	NA
	3WSSL	9/6/90	3,500	NA	NA	900	550	110	460	NA	NA	NA	NA	ND(<.05)
	WS15SL	11/29/90	9,200	NA	NA	1,100	1,100	210	1,100	NA	NA	NA	NA	NA
	WS21SL	2/20/91	8,800	NA	NA	960	780	200	920	NA	NA	NA	NA	NA
	WS29SL	5/22/91	28,000	NA	NA	5,800	1,200	460	2,300	NA	NA	NA	NA	NA

Table 1
GROUNDWATER ANALYSES AND ANALYTICAL TECHNIQUES

Chevron Service Station No. 9-8139
16304 Foothill Blvd, San Leandro, California

WELL NUMBER	SAMPLE NO.	DATE SAMPLED	TPH Gasoline	TPH Diesel	TOTAL OIL & GREASE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	Pb	TOTAL Cr	METALS Cd	Zn	ETHYLENE DIBROMIDE
MW-4	WS-4SL	12/5/89	19,000	NA	NA	390	1,300	460	1,800	NA	NA	NA	NA	ND(<.05)
	WS-5SL	5/24/90	4,500	NA	NA	210	440	140	480	NA	NA	NA	NA	NA
	4WSSL	9/6/90	6,000	NA	NA	680	520	170	580	NA	NA	NA	NA	ND(<.05)
	WS16SL	11/29/90	15,000	NA	NA	800	1,000	430	1,700	NA	NA	NA	NA	NA
	WS22SL	2/20/91	15,000	NA	NA	640	390	420	1,600	NA	NA	NA	NA	NA
DUP	WS23SL	2/20/91	15,000	NA	NA	680	410	430	1,600	NA	NA	NA	NA	NA
	WS30SL	5/22/91	9,800	NA	NA	580	140	310	740	NA	NA	NA	NA	NA
DUP	WS31SL	5/22/91	7,200	NA	NA	520	130	270	670	NA	NA	NA	NA	NA
MW-5	WS-6SL *	5/25/90	28,000	NA	NA	920	1,100	460	1,300	NA	NA	NA	NA	2.40
	NS *	9/7/90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	NS	11/29/90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	NS	2/20/91	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	NS	5/22/91	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-6	WS-7SL *	5/25/90	ND(<50)	NA	NA	ND(<2)	ND(<3)	ND(<3)	ND(<3)	NA	NA	NA	NA	ND(<.02)
	6WSSL *	9/7/90	ND(<50)	NA	NA	ND(<2)	ND(<3)	ND(<3)	ND(<3)	NA	NA	NA	NA	ND(<.05)
	WS17SL	11/29/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS24SL	2/20/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS32SL	5/22/91	ND(<50)	NA	NA	0.5	0.7	ND(<.5)	1.1	NA	NA	NA	NA	NA
MW-7	WS-8SL *	5/25/90	ND(<50)	NA	NA	ND(<2)	ND(<3)	ND(<3)	ND(<3)	NA	NA	NA	NA	ND(<.02)
	7WSSL *	9/7/90	ND(<50)	NA	NA	ND(<2)	ND(<3)	ND(<3)	ND(<3)	NA	NA	NA	NA	ND(<.05)
DUP	8WSSL *	9/7/90	ND(<50)	NA	NA	ND(<2)	ND(<3)	ND(<3)	ND(<3)	NA	NA	NA	NA	ND(<.05)
	WS14SL	11/29/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS20SL	2/20/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS28SL	5/22/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA

Table 1
GROUNDWATER ANALYSES AND ANALYTICAL TECHNIQUES

Chevron Service Station No. 9-8139
16304 Foothill Blvd, San Leandro, California

WELL NUMBER	SAMPLE NO.	DATE SAMPLED	TPH Gasoline	TPH Diesel	TOTAL OIL & GREASE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	Pb	TOTAL Cr	METALS Cd	Zn	ETHYLENE DIBROMIDE
MW-8	9WSSL	9/7/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	ND(<.05)
	WS11SL	11/29/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
DUP	WS12SL	11/29/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS25SL	2/20/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS33SL	5/22/91	ND(<50)	NA	NA	0.6	ND(<.5)	ND(<.5)	1.0	NA	NA	NA	NA	NA
EW-1**	WS-9SL *	5/25/90	3,900	NA	NA	260	430	64	340	NA	NA	NA	NA	0.03
RINSATE	RS-4SL	12/5/89	ND(<500)	NA	ND(<5000)	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	ND(<500)	ND(<100)	ND(<10)	D(<10)	ND(<.05)
	RS-1SL	5/24/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	1RSSL	9/7/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	ND(<.05)
	RS3SL	2/20/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	RS4SL	5/22/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
TRIP BLANK	TB3SL	2/20/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	TB4SL	5/22/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA

Notes: Groundwater chemistry values presented in parts per billion (ppb)
ND = Less than method detection
NS = Not Sampled due to the presence of floating product
NA = No Analysis
DUP = Duplicate Sample

* In 5/90 and in 9/90 MW-5, MW-6, MW-7 and EW-1 were analyzed for Volatile Organics using EPA Method 8240 (624). Other samples were analyzed using EPA Method 8020 (602).

** EW-1 is not monitored in quarterly events.

Table 2
GROUNDWATER ELEVATION DATA

Chevron Service Station No. 9-8139
16304 Foothill Blvd., San Leandro, California

Well Number	Date Sampled	TOC Elevation (ft-MSL)	Depth to Water (ft-BTOC)	PSH (ft)	Water Elevation (ft-MSL)
MW-1	03/23/90	127.09	12.92	ND	114.17
	09/06/90	127.09	14.68	ND	112.41
	09/25/90	127.09	15.01	ND	112.08
	11/29/90	127.09	14.82	ND	112.27
	02/20/91	127.09	14.29	ND	112.80
	04/19/91	127.09	12.16	ND	114.93
	05/22/91	127.09	13.69	ND	113.40
MW-2	03/23/90	125.98	12.40	ND	113.58
	09/06/90	125.98	14.85	ND	111.13
	09/25/90	125.98	14.80	ND	111.18
	11/29/90	125.98	14.40	ND	111.58
	02/20/91	125.98	14.09	ND	111.89
	04/19/91	125.98	12.62	ND	113.36
	05/22/91	125.98	12.98	ND	113.00
MW-3*	03/23/90	127.84	17.50	ND	110.34
	09/06/90	126.77	18.72	ND	108.05
	09/25/90	126.77	18.40	ND	108.37
	11/29/90	126.77	18.97	ND	107.80
	02/20/91	126.77	19.20	ND	107.57
	04/19/91	126.77	17.81	ND	108.96
	05/22/91	126.77	17.88	ND	108.89
MW-4	03/23/90	125.22	16.02	ND	109.20
	09/06/90	125.22	17.35	ND	107.87
	09/25/90	125.22	17.48	ND	107.74
	11/29/90	125.22	17.61	ND	107.61
	02/20/91	125.22	17.81	ND	107.41
	04/19/91	125.22	15.80	ND	109.42
	05/22/91	125.22	16.68	ND	108.54
MW-5	03/23/90	125.85	16.89	ND	108.96 **
	09/07/90	125.85	18.46	0.04	107.42 **
	09/25/90	125.85	19.30	1.3	107.58 **
	11/29/90	125.85	18.87	0.71	107.54 **
	02/20/91	125.85	18.91	0.47	107.31 **
	04/19/91	125.85	16.99	0.48	109.24 **
	05/22/91	125.85	17.69	0.33	108.42 **

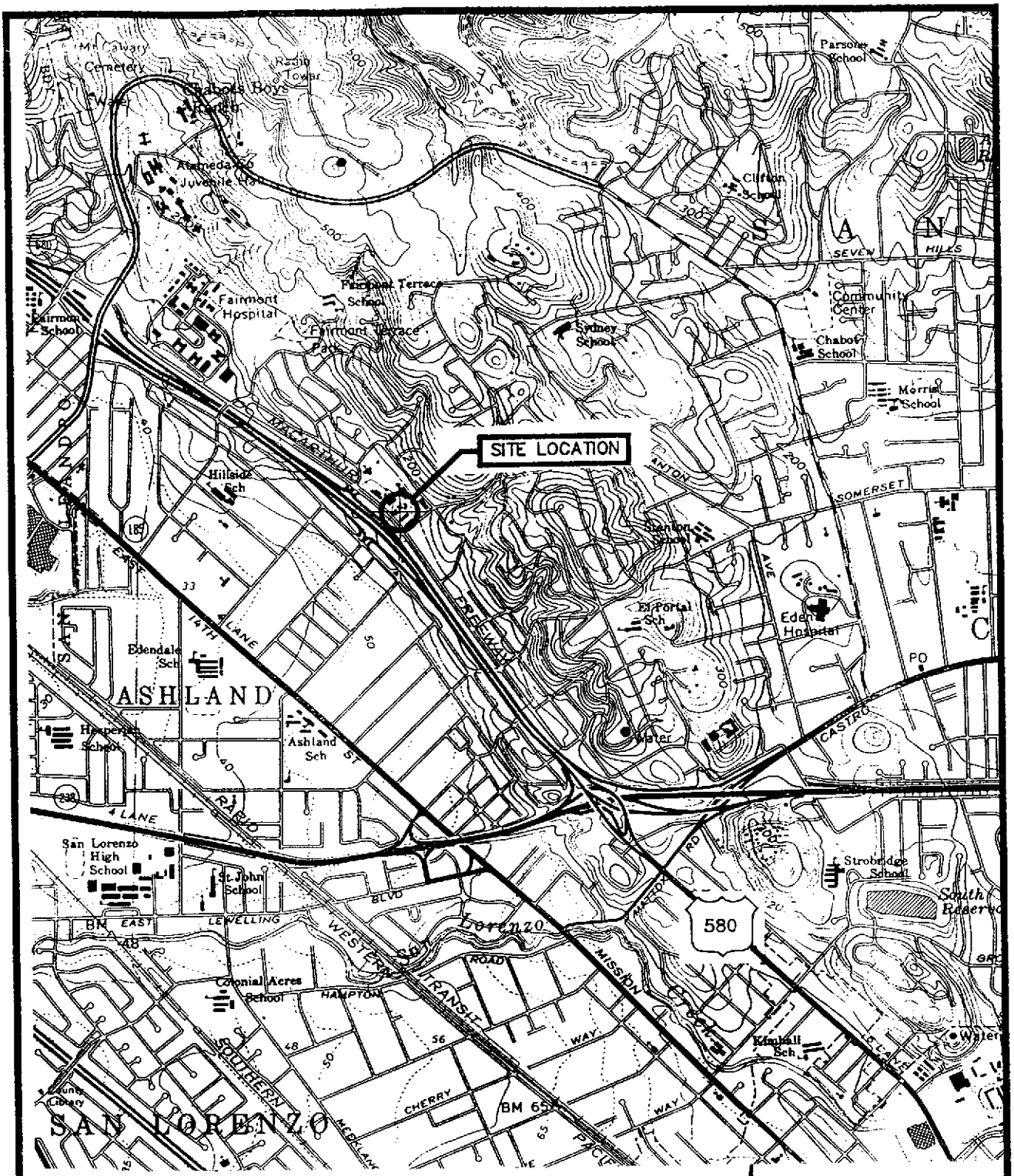
(continued)

Table 2
GROUNDWATER ELEVATION DATA

Chevron Service Station No. 9-8139
16304 Foothill Blvd., San Leandro, California
(continued)

Well Number	Date Sampled	TOC Elevation (ft-MSL)	Depth to Water (ft-BTOC)	PSH (ft)	Water Elevation ** (ft-MSL)
MW-6	03/23/90	124.18	18.51	ND	105.67
	09/07/90	124.18	16.18	ND	108.00
	09/25/90	124.18	16.42	ND	107.76
	11/29/90	124.18	16.11	ND	108.07
	02/20/91	124.18	16.09	ND	108.09
	04/19/91	124.18	15.15	ND	109.03
	05/22/91	124.18	15.41	ND	108.77
MW-7	03/23/90	126.86	21.40	ND	105.46
	09/07/90	126.86	18.38	ND	108.48
	09/25/90	126.86	19.25	ND	107.61
	11/29/90	126.86	18.55	ND	108.31
	02/20/91	126.86	18.55	ND	108.31
	04/19/91	126.86	17.33	ND	109.53
	05/22/91	126.86	17.42	ND	109.44
MW-8	09/07/90	123.61	16.07	ND	107.54
	09/25/90	123.61	16.20	ND	107.41
	11/29/90	123.61	16.30	ND	107.31
	02/20/91	123.61	16.32	ND	107.29
	04/19/91	123.61	14.71	ND	108.90
	05/22/91	123.61	15.42	ND	108.19

Notes:
TOC: Top of casing
ft-MSL: Feet above mean sea level
ft-BTOC: Feet below top of casing
ND: Not detected
* MW-3 wellhead modified and resurveyed on 9/6/90.
** Corrected water elevation in MW-5 due to presence of phase separate hydrocarbon.
Assumed density of gasoline = 0.79

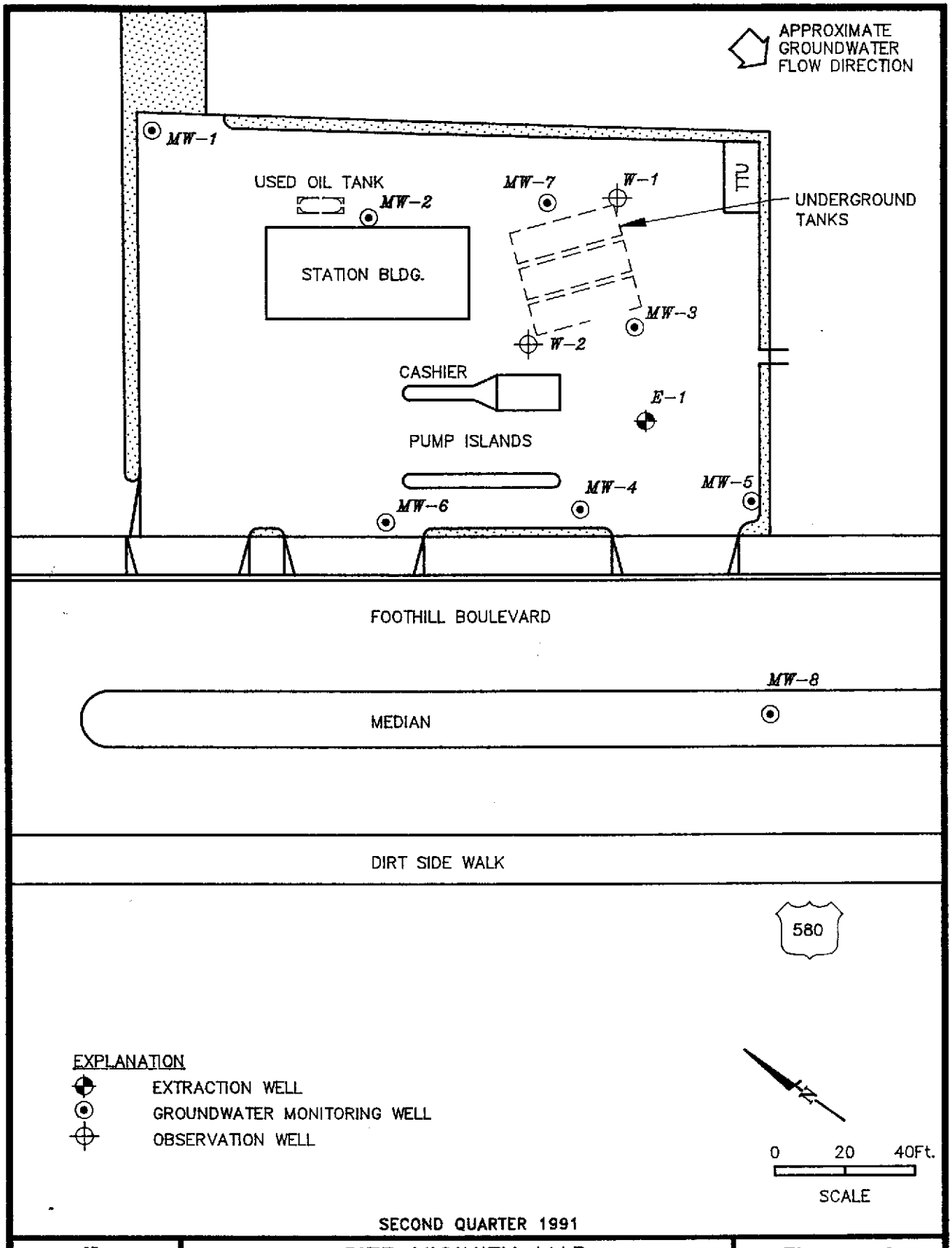


Hayward, California [NE/4 Hayward 15' Quadrangle]
N3737.5–W12200/7.5

BURLINGTON ENVIRONMENTAL, INC.
CHEMPRO Division

SITE LOCATION MAP
Chevron Service Station No. 9–8139
16304 Foothill Boulevard
San Leandro, California

DRAWN BY: JU	
DATE: 3/29/91	
PROJECT No. 1158	FIGURE 1
Drawing No. A0615823	



SECOND QUARTER 1991

BURLINGTON ENVIRONMENTAL INC.
CHEMPRO Division

SITE VICINITY MAP
Chevron Service Station No. 9-8139
16304 Foothill Boulevard
San Leandro, California

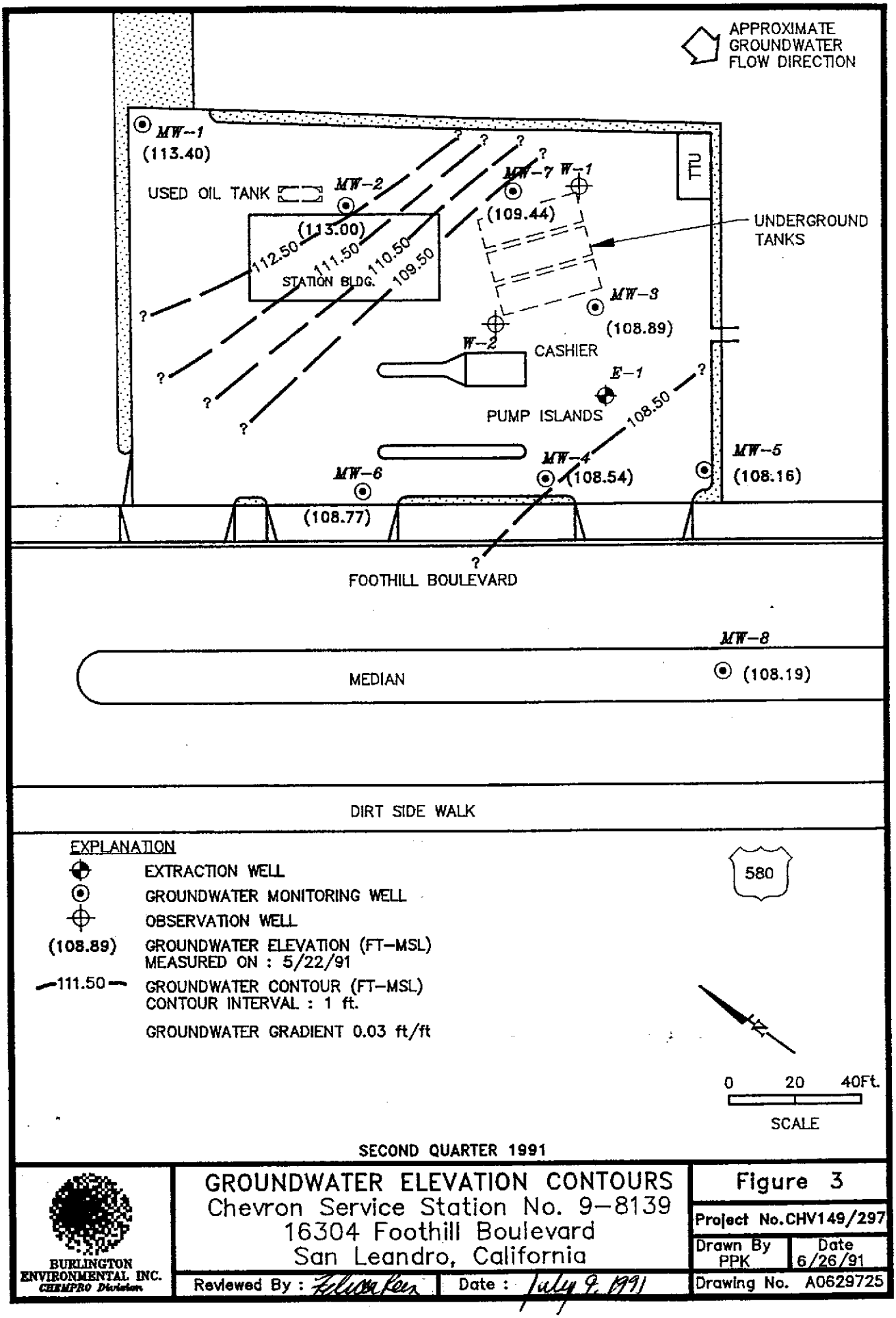
Figure 2

Project No. CHV149/297

Drawn By PPK | Date 6/26/91

Reviewed By : [signature] Date : July 8, 1991

Drawing No. A0629724



SECOND QUARTER 1991

BURLINGTON ENVIRONMENTAL INC.
CHEMPRO Division

GROUNDWATER ELEVATION CONTOURS
Chevron Service Station No. 9-8139
16304 Foothill Boulevard
San Leandro, California

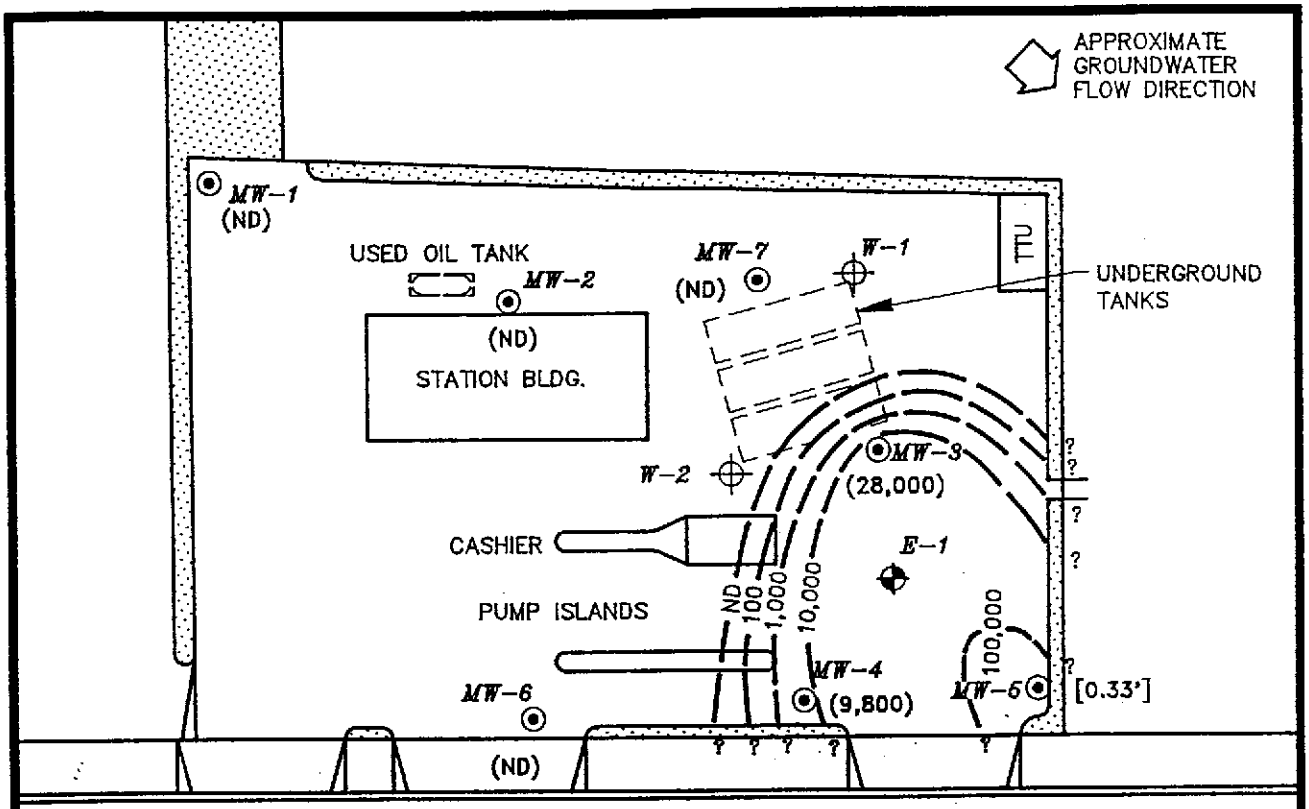
Figure 3

Project No. CHV149/297

Drawn By PPK | Date 6/26/91

Reviewed By : Julia Kerr | Date : July 9, 1991

Drawing No. A0629725



EXPLANATION

- EXTRACTION WELL
- GROUNDWATER MONITORING WELL
- OBSERVATION WELL
- 100 — TPH (TOTAL PETROLEUM HYDROCARBONS) CONCENTRATION IN GROUNDWATER CONTOUR SAMPLES COLLECTED ON : 5/22/91
- (9,800) — CONCENTRATION IN PARTS PER BILLION METHOD DETECTION LIMIT = 50 ppb
- ND — NOT DETECTED
- [0.33'] — PHASE SEPARATED HYDROCARBONS (FEET)

580

0 20 40Ft.

SCALE

SECOND QUARTER 1991

BURLINGTON ENVIRONMENTAL INC.
CHEMPRO Division

TPH ISOCONCENTRATION CONTOURS
Chevron Service Station No. 9-8139
16304 Foothill Boulevard
San Leandro, California

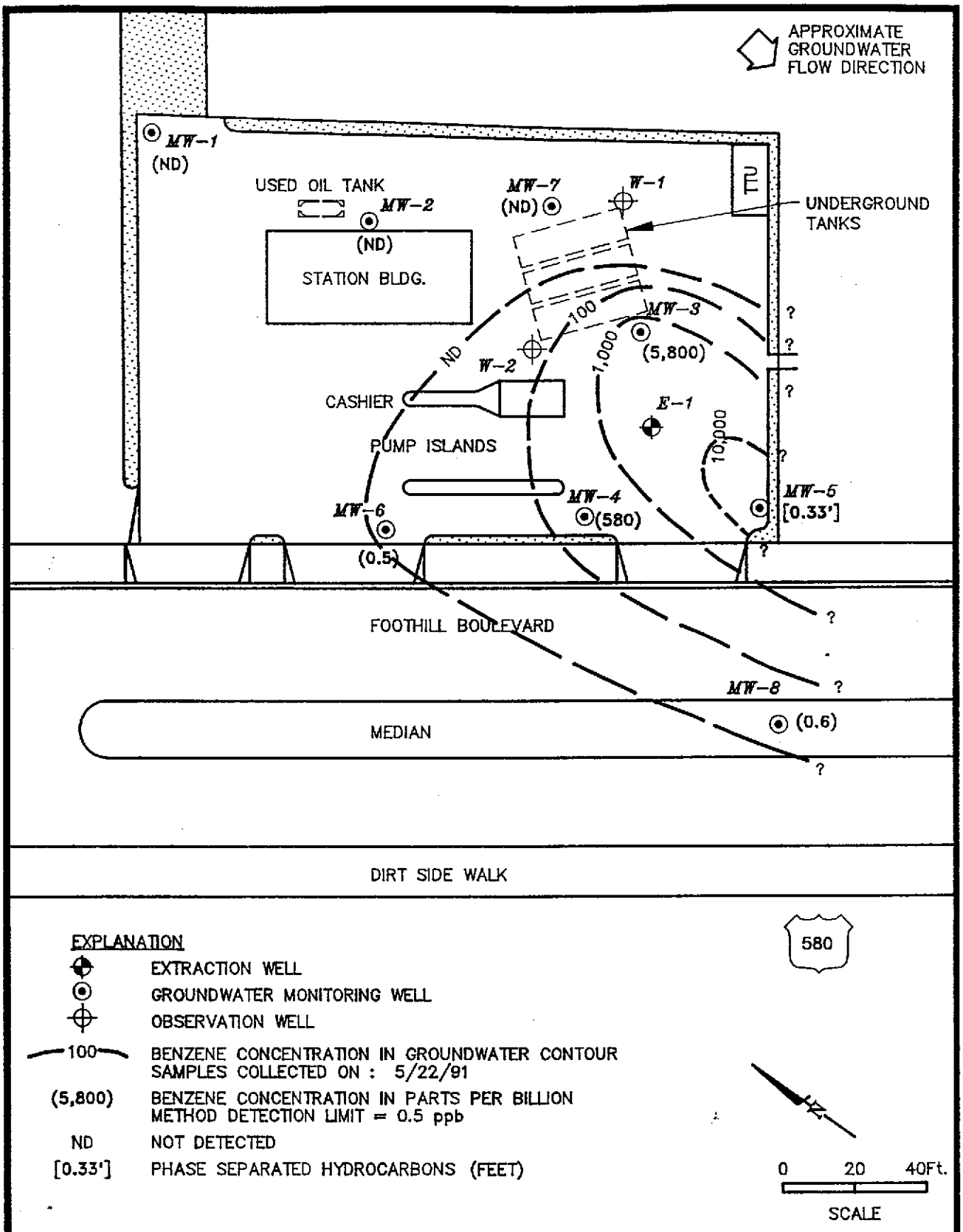
Figure 4

Project No. CHV149/297

Drawn By: PPK | Date: 6/26/91

Reviewed By : [signature] Date : July 9, 1991

Drawing No. A0629726



SECOND QUARTER 1991

BURLINGTON ENVIRONMENTAL INC.
CHEMPEO Division

BENZENE ISOCONCENTRATION CONTOURS
Chevron Service Station No. 9-8139
16304 Foothill Boulevard
San Leandro, California

Figure 5

Project No. CHV149/297

Drawn By PPK | Date 6/26/91

Reviewed By : [signature] | Date : July 9, 1991

Drawing No. A0629727

Appendix A

GROUNDWATER SAMPLING and ANALYSIS PROCEDURES

Appendix A

GROUNDWATER SAMPLING AND ANALYSIS PROCEDURES

INTRODUCTION

The sampling and analysis procedures for water-quality monitoring programs are contained in this Appendix. These procedures ensure that consistent and reproducible sampling methods are used, proper analytical methods are applied, analytical results are accurate, precise, and complete, and the overall objectives of the monitoring program are achieved.

SAMPLE COLLECTION

Sample collection procedures include equipment cleaning, water-level and total well-depth measurements, and well purging and sampling.

Equipment Cleaning

Sample bottles, caps, and septa were precleaned and provided by a Chevron-approved laboratory. All sampling containers were used only once and discarded after analysis was complete.

Before starting the sampling event, all equipment to be placed in the well or come in contact with groundwater was disassembled and cleaned thoroughly with detergent water, then steam cleaned with service station tap water, and rinsed with distilled water. Any parts that may absorb contaminants, such as plastic pump valves or bladders, were cleaned as described above or replaced.

During the sampling event all equipment used in the well was washed with detergent, steam-cleaned, and rinsed with distilled water before purging or sampling the next well. The rinse water is stored in 55-gallon drums onsite and will be disposed of by Chevron, or pumped through the treatment system when operation begins.

Quality Assurance Samples

No rinsate sample was collected because all purging and sampling bailers have been dedicated to their respective wells. All sample bailers were steam cleaned initially, washed with TSP and rinsed with distilled water before being dedicated in the monitoring well. A trip blank was taken to insure contamination did not result from travel exposure.

Water-Level, Floating-Hydrocarbon, and Total Well-Depth Measurements

Before purging and sampling, the depth to water, floating hydrocarbon thickness, and the well total depth were measured using an oil water interface probe and an electric sounder. The electric sounder, manufactured by Slope-Indicator, Inc., is a transistorized instrument that uses a reel-mounted, two conductor, coaxial cable that connects the control panel to the sensor. Cable markings are stamped at 1-foot intervals. An engineers rule was used to measure the depths to the closest 0.01 foot. The water level was measured by lowering the sensor into the monitor well. A low current circuit is completed when the sensor contacts the water, which serves as an electrolyte. The current is amplified and fed across an indicator light and audible buzzer, signaling when water has been contacted. A sensitivity control compensates for very saline or conductive water. The oil water interface probe signals with a solid sound when it contacts phase-separated hydrocarbons. When the probe detects water, the sound changes to a beeping sound.

Phase-separated hydrocarbons were detected in monitoring well MW-5 at a thickness of 0.33 feet. When PSH is detected at greater than 1/32-inch in thickness, a sample is not collected.

All liquid measurements were recorded to the nearest 0.01 foot in the field logbook. The groundwater elevation at each monitor well was calculated by subtracting the measured depth to water from the surveyed well-casing elevation. Well total depth was then measured by lowering the sensor to the bottom of the well. Well total depth, used to calculate purge volumes and to determine whether the well screen is partially obstructed by silt, was recorded to the nearest 0.01 foot in the field log book.

Well Purging

Before sampling, standing water in the casing was purged from the monitor wells using a PVC hand bailer. Samples were collected from the monitor wells after a minimum of four casing volumes had been evacuated or the pH, electrical conductivity, and temperature had stabilized. In the case that the monitor well was purged until dry, the well was allowed to recover to within 80% of its static water level and sampled.

The pH, electrical conductivity, and temperature meter were calibrated each day before beginning field activities. After every well volume of groundwater removed from the monitoring well, field measurements were taken. The data is presented on the water sample field data sheets. The calibration was checked once each day to verify meter performance. All field meter calibrations were recorded in the field log book.

Groundwater generated from well-purging operations were contained for temporary storage in 55-gallon drums. All drums were labeled and stored onsite in a location designated by the station manager. The sampler recorded the following information on the drum label for each drum generated:

* Drum content (i.e., groundwater)
* Source (i.e., well identification code)
* Date generated
* Client contact
* Project number
* Name of sampler

Well Sampling

A Teflon bailer was used for well sampling. Glass bottles of at least 40 milliliters volume and fitted with Teflon-lined septa were used in sampling for volatile organics. These bottles were filled completely to prevent air from remaining in the bottle. A positive meniscus forms when the bottle is completely full. A convex Teflon septum is placed over the meniscus to eliminate air. After capping, the bottle was inverted and tapped to verify that it did not contain air bubbles. The sample containers for other

parameters were filled, and capped. Duplicate sample analysis was performed on groundwater samples collected from monitoring well MW-4 and were analyzed for the same chemical analyses.

SAMPLE HANDLING AND DOCUMENTATION

The following section specifies the procedures and documentation used during sample handling.

Sample Handling

All sample containers were labeled immediately following sample collection. Samples were kept cool with ice cubes until received by the laboratory. Ice cubes were replaced each day to maintain refrigeration. At the time of sampling, each sample was logged on a chain-of-custody record which accompanied the sample to the Superior Precision Analytical.

Sample Documentation

The following procedures were used during sampling and analysis to provide chain-of-custody control during sample handling from collection through storage. Sample documentation included the use of the following:

* Field log books to document sampling activities in the field
* Labels to identify individual samples
* Chain-of-custody record sheets for documenting possession and transfer of samples

Field Log Book

In the field, the sampler recorded the following information on the Water Sample Field Data Sheet for each sample collected:

* Project number
* Client name

* Location
* Name of sampler
* Date and time
* Pertinent well data (e.g., casing diameter, depth to water, well depth)
* Calculated and actual purge volumes
* Purging equipment used
* Sampling equipment used
* Appearance of each sample (e.g., color, turbidity, sediment)
* Results of field analyses (i.e., temperature, pH, electrical conductivity)
* General comments

The field logbooks were signed by the sampler.

Labels

Sample labels contained the following information:

* Project number
* Sample number (i.e., well designation)
* Sampler's initials
* Date and time of collection
* Type of preservative used (if any)

Sampling and Analysis Chain-of-Custody Record

The Sampling and Analysis Chain-of-Custody record, initiated at the time of sampling, contains, but is not limited to, the well number, sample type, analytical request, date of sampling, and the name of the sampler. The record sheet was signed, timed, and dated by the sampler when transferring the samples. The number of custodians in the chain of

possessions were kept to a minimum. A copy of the Sampling and Analysis Chain-of-Custody record is included in Appendix C.

Appendix B

WATER SAMPLE FIELD DATA SHEETS

FIELD REPORT
WATER LEVEL / FLOATING PRODUCT SURVEY

PROJECT NO.: 1158
LOCATION: 16304 Foothill Blvd., San Leandro
SAMPLER: D.M. Lamb
STATION NO.: 9.8139
DATE: 4/19/91
TIME AND DATE OF SYSTEM START-UP:

WELL ID	TOTAL DEPTH (Feet)	WELL DIAMETER (in)	DEPTH TO WATER (Feet)	DEPTH TO FLOATING PRODUCT (Feet)	FLOATING PRODUCT THICKNESS (Feet)	TIME	COMMENTS
mw-1	27.52	2	12.16	—	—	1308	
mw-2	30.31	2	12.62	—	—	1315	
mw-3	25.51	2	17.81	—	—	1359	
mw-4	21.91	2	15.80	—	—	1341	Bailed 1/4 gl. of H_2O from Christy,
mw-5	—	2	16.99	16.51	.48	1416	STRONG ODOR
mw-6	28.90	2	15.15	—	—	1349	
mw-7	25.91	2	17.33	—	—	1324	Bailed 1/2 gl. of H_2O from Christ B
mw-8	30.72	2	14.71	—	—	1332	

FIELD REPORT
WATER LEVEL / FLOATING PRODUCT SURVEY

PROJECT NO.: 1297
LOCATION: 16304 Foothill Blvd., San Leandro
SAMPLER: DAL/MD
STATION NO.: 9.8139
DATE: 5/22/91
TIME AND DATE OF SYSTEM START-UP:

WELL ID	TOTAL DEPTH (Feet)	WELL DIAMETER (In)	DEPTH TO WATER (Feet)	DEPTH TO FLOATING PRODUCT (Feet)	FLOATING PRODUCT THICKNESS (Feet)	TIME	COMMENTS
MW-1	27.45	2	13.69	-	-	1028	
MW-2	30.25	2	12.98	-	-	1037	
MW-3	25.61	2	17.88	-	-	1306	
MW-4	22.01	2	16.68	-	-	1437	
MW-5	NM	2	17.69	17.36	.33	1710	
MW-6	29.01	2	15.41	-	-	1539	
MW-7	25.80	2	17.42	-	-	1049	
MW-8	30.88	2	15.42	-	-	1641	

NM: Not MEASURED

CHW-174

WATER DATA SHEET

PROJECT NO.: 1297

SAMPLE ID.: WS - 27 - SL

LOCATION: SAN LEANDRO

DATE: 5/22/91

STATION NO.: 9.8139

WELL/SAMPLE POINT DESIGNATION: MW-1

SAMPLER: DAL / MD

[X] SAMPLING [ ] DEVELOPING [ ] BAILING FLOATING PRODUCT

Casing Diameter:
2 inch X
3 inch
4 inch
6 inch
other

Screened Int. (ft.): 25-30

Initial DTW (ft.): 13.69 @ 1028

Initial TD (ft.): 27.45

Casing Elev. (ft.): 127.09

Water Column Height (ft.): 13.76

TD (Actual) (ft.): 30

80 % Recovery (ft.): 16.37

Calc. Casing Vol. (gal.): 2.34
(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Calc. Purge Vol. (gal.): 9.35

Final DTW (ft.): 14.82 @ 1330

Final TD (ft.): 27.48

Product Bailed (gal.):

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
1120	2.5	11.84	72.1	19.33×10^2	CAMLKY/GREY	
1124	3.5	12.18	71.3	3.47×10^3	" "	25.71
1216						18.99
1330						14.82

Odor ? NONE

Actual Purge Vol. (gal.): 3.5

PURGE METHOD:
___ Bailer (Teflon)
X Bailer (PVC)
___ Well Wizard
___ Dedicated Bailer
___ Other

SAMPLE METHOD:
X Bailer (Teflon)
___ Bailer (PVC)
___ Dedicated Bailer
___ Other

REMARKS: Bailed Approximately (~) .5 gallons of H_2O from inside well cover.

Sampled @ 1332 on 5/22/91

WEATHER: OVERCAST ~ 62°

WATER DATA SHEET

PROJECT NO.: 1297

LOCATION: SAN LEANDRO

STATION NO.: 9.8139

SAMPLER: DAL/MD

SAMPLE ID.: WS - 26 - SL

DATE: 5/22/91

WELL/SAMPLE

POINT DESIGNATION: MW-2

[X] SAMPLING [ ] DEVELOPING [ ] BAILING FLOATING PRODUCT

Casing Diameter:
2 inch X
3 Inch ____
4 inch ____
6 Inch ____
other ____

Casing Elev. (ft.): 125.98

TD (Actual) (ft.): 30

Screened Int. (ft.): 25-30

Initial DTW (ft.): 12.98 @ 1037

Initial TD (ft.): 30.25

Water Column Height (ft.): 17.27

80 % Recovery (ft.): 16.43

Calc. Casing Vol. (gal.): 2.94
(2" = .17) (3' = .38) (4" = .66) (6" = 1.5)

Calc. Purge Vol. (gal.): 11.74

Final DTW (ft.): 14.22 @ 1258

Final TD (ft.): 30.25

Product Bailed (gal.): ____

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
1221	3	8.62	74.8	7.90×10^2	OLIVE	
1226	6	7.96	71.2	8.43×10^2	CAMEL	
1233	11.5	8.25	69.5	7.84×10^2	CAMEL	27.28
1258						14.22

Odor? NONE

Actual Purge Vol. (gal.): 11.5

PURGE METHOD:
- ___ Bailer (Teflon)
- X Bailer (PVC)
- ___ Well Wizard
- ___ Dedicated Bailer
- ___ Other ____

SAMPLE METHOD:
- X Bailer (Teflon)
- ___ Bailer (PVC)
- ___ Dedicated Bailer
- ___ Other ____

REMARKS: Sampled @ 1311 on 5/22/91

WEATHER: OVERCAST ~ 60°

WATER DATA SHEET

PROJECT NO.: 1297
SAMPLE ID.: WS - 29 - SL
LOCATION: SAN LEANDRO
DATE: 5/22/91
STATION NO.: 9.8139
WELL/SAMPLE
SAMPLER: OAC / MD
POINT DESIGNATION: MW-3

[X] SAMPLING [ ] DEVELOPING [ ] BAILING FLOATING PRODUCT

Casing Diameter:
2 inch X
3 inch ____
4 inch ____
6 inch ____
other ____

Screened Int. (ft.): 15.5 - 25.5
Initial DTW (ft.): 17.88 @ 1306
Initial TD (ft.): 25.61
Water Column Height (ft.): 7.73
80 % Recovery (ft.): 19.42

Calc. Casing Vol. (gal.): 1.31
(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)
Calc. Purge Vol. (gal.): 5.25
Final DTW (ft.): 20.01 @ 1400
Final TD (ft.): 25.65
Product Bailed (gal.): ____

Casing Elev. (ft.): 126.77
TD (Actual) (ft.): 25.5

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
1315	1.5	7.24	82.4	11.4×10^2	OLIVE	
1319	3.0	7.10	78.8	11.68×10^2	OLIVE	
1325	4.5	7.12	76.6	11.17×10^2	OLIVE	
1330	6.0	7.12	74.7	11.45×10^2	OLIVE	

Odor? SLIGHT PRODUCT ODOR

Actual Purge Vol. (gal.): 6

PURGE METHOD:
___ Bailer (Teflon)
X Bailer (PVC)
___ Well Wizard
___ Dedicated Bailer
___ Other ____

SAMPLE METHOD:
X Bailer (Teflon)
___ Bailer (PVC)
___ Dedicated Bailer
___ Other ____

REMARKS: Sampled @ 1445 on 5/22/91

WEATHER: SUNNY ~ 75°

WATER DATA SHEET

WS · 31 · SL (Duplicate)

PROJECT NO.: 1297

LOCATION: SAN LEANDRO

STATION NO.: 9.8139

SAMPLER: DAC/MD

SAMPLE ID.: WS - 30 - SL

DATE: 5/22/91

WELL/SAMPLE POINT DESIGNATION: MW-4

[X] SAMPLING [ ] DEVELOPING [ ] BAILING FLOATING PRODUCT

Casing Diameter:
2 inch X
3 inch ____
4 inch ____
6 inch ____
other ____

Screened Int. (ft.): 12-22

Initial DTW (ft.): 16.68 @ 1437

Initial TD (ft.): 22.01

Casing Elev. (ft.): 125.22

Water Column Height (ft.): 5.33

TD (Actual) (ft.): 22

80 % Recovery (ft.): 17.74

Calc. Casing Vol. (gal.): .9061
(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Calc. Purge Vol. (gal.): 3.62

Final DTW (ft.): 17.45 @ 1526

Final TD (ft.): 22.02

Product Bailed (gal.): ____

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
1502	1	10.52	77.7	6.66×10^2	OLIVE	
1507	2	10.37	73.5	6.95×10^2	OLIVE	
1513	3	10.37	73.2	7.63×10^2	OLIVE	
1518	4	10.38	72.4	8.98×10^2	OLIVE	

Odor? MODERATE PRODUCT ODOR

Actual Purge Vol. (gal.): 4

PURGE METHOD:
- ___ Bailer (Teflon)
- X Bailer (PVC)
- ___ Well Wizard
- ___ Dedicated Bailer
- ___ Other ____

SAMPLE METHOD:
- X Bailer (Teflon)
- ___ Bailer (PVC)
- ___ Dedicated Bailer
- ___ Other ____

REMARKS: Bailed .5 gallons of H2O from INSIDE WELL COVER.

SAMPLED WS-30-SL @ 1530 ON 5/22/91.

SAMPLED WS-31-SL @ 1541 ON 5/22/91

WEATHER: SUNNY ~ 70°

WATER DATA SHEET

PROJECT NO.: 1297

SAMPLE ID.: Not Applicable

LOCATION: San Leandro

DATE: 5/22/91

STATION NO.: 9-8139

WELL/SAMPLE

SAMPLER: DAC/MD

POINT DESIGNATION: MW-5

☐ SAMPLING ☐ DEVELOPING ☐ BAILING FLOATING PRODUCT

Casing Diameter:
2 inch X
3 inch ____
4 inch ____
6 inch ____
other ____

Screened Int. (ft.): 14.3 - 23.7

Initial DTW (ft.): 17.69 @ 1710

Initial TD (ft.): 17.36 to product

Casing Elev. (ft.): 125.85

Water Column Height (ft.): ____

TD (Actual) (ft.): 23.9

80 % Recovery (ft.): ____

Calc. Casing Vol. (gal.): ____
(2" = .17) (3' = .38) (4" = .66) (6" = 1.5)

Calc. Purge Vol. (gal.): ____

Final DTW (ft.): 20.71 @ 1741

Final TD (ft.): Ø (to product)

Product Bailed (gal.): 5 gallons

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)

Odor? ____

Actual Purge Vol. (gal.): ____

PURGE METHOD:
- ___ Bailer (Teflon)
- X Bailer (PVC)
- ___ Well Wizard
- X Dedicated Bailer
- ___ Other ____

SAMPLE METHOD:
- ___ Bailer (Teflon)
- ___ Bailer (PVC)
- ___ Dedicated Bailer
- ___ Other ____

REMARKS: Total PSH detected with Oil/Water interface probe: .33'. Bailed 5 gallons of PSH/H_2O before well went dry.

WEATHER: Sunny ~ 68°

WATER DATA SHEET

PROJECT NO.: 1297

LOCATION: San Leandro

STATION NO.: 9. 8139

SAMPLER: DAL / MD

SAMPLE ID.: WS - 32 - SL

DATE: 5/22/91

WELL/SAMPLE

POINT DESIGNATION: MW-6

[X] SAMPLING [ ] DEVELOPING [ ] BAILING FLOATING PRODUCT

Casing Diameter:
2 inch X
3 Inch
4 inch
6 Inch
other

Screened Int. (ft.): 24.6-29.6

Initial DTW (ft.): 15.41 @ 1537

Initial TD (ft.): 29.01

Casing Elev. (ft.): 124.18

Water Column Height (ft.): 13.6

TD (Actual) (ft.): 29.2

80 % Recovery (ft.): 18.13

Calc. Casing Vol. (gal.): 2.31
(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Calc. Purge Vol. (gal.): 9.25

Final DTW (ft.): 19.76 @ 1622

Final TD (ft.): 29.01

Product Bailed (gal.):

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
1600	2.5	7.88	73.0	7.11×10^2	olive	
1606	5.0	8.04	70.4	7.46×10^2	olive	
1611	7.5	8.07	68.8	7.28×10^2	olive	
1617	10.0	7.82	68.7	7.15×10^2	Beige	

Odor? NONE

Actual Purge Vol. (gal.): 10

PURGE METHOD:
- ___ Bailer (Teflon)
- X Bailer (PVC)
- ___ Well Wizard
- ___ Dedicated Bailer
- ___ Other

SAMPLE METHOD:
- X Bailer (Teflon)
- ___ Bailer (PVC)
- ___ Dedicated Bailer
- ___ Other

REMARKS: Sampled at 1630 on 5/22/91

WEATHER: Sunny ~ 73°

WATER DATA SHEET

PROJECT NO.: 1297
SAMPLE ID.: WS - 28 - SL
LOCATION: SAN LEANDRO
DATE: 5/22/91
STATION NO.: 9.8139
WELL/SAMPLE
SAMPLER: DAL / MD
POINT DESIGNATION: MW-7

[X] SAMPLING [ ] DEVELOPING [ ] BAILING FLOATING PRODUCT

Casing Diameter:
2 inch X
3 inch ____
4 inch ____
6 inch ____
other ____

Screened Int. (ft.): 21.5-26.5
Initial DTW (ft.): 17.42 @ 1049
Initial TD (ft.): 25.80
Water Column Height (ft.): 8.38
80 % Recovery (ft.): 19.09

Calc. Casing Vol. (gal.): 1.42
(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)
Calc. Purge Vol. (gal.): 5.68
Final DTW (ft.): 18.28 @ 1405
Final TD (ft.): 25.82
Product Bailed (gal.): ____

Casing Elev. (ft.): 126.86
TD (Actual) (ft.): 26

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
1247	1.5	7.82	74.7	7.92×10^2	Beige	
1249	3.0	7.82	73.1	8.46×10^2	TAN	24.83
1405						18.28

Odor? NONE

Actual Purge Vol. (gal.): 3

PURGE METHOD:
___ Bailer (Teflon)
X Bailer (PVC)
___ Well Wizard
___ Dedicated Bailer
___ Other ____

SAMPLE METHOD:
X Bailer (Teflon)
___ Bailer (PVC)
___ Dedicated Bailer
___ Other ____

REMARKS: Sampled @ 1428 on 5/22/91

WEATHER: CLEAR, SUNNY ~ 70°

WATER DATA SHEET

PROJECT NO.: 1297 SAMPLE ID.: WS - 33 - SL

LOCATION: SAN LEANDRO DATE: 5/22/91

STATION NO.: 9.8139 WELL/SAMPLE

SAMPLER: OAL/MD POINT DESIGNATION: MW-8

[X] SAMPLING [ ] DEVELOPING [ ] BAILING FLOATING PRODUCT

Casing Diameter:
2 inch X
3 inch ____
4 inch ____
6 inch ____
other ____

Screened Int. (ft.): 21.5 - 30.5

Initial DTW (ft.): 15.42 @ 1641

Initial TD (ft.): 30.88

Casing Elev. (ft.): 123.61

Water Column Height (ft.): 15.46

TD (Actual) (ft.): 31

80 % Recovery (ft.): 18.52

Calc. Casing Vol. (gal.): 2.62
(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Calc. Purge Vol. (gal.): 10.51

Final DTW (ft.): 15.61 @ 1722

Final TD (ft.): 30.88

Product Bailed (gal.): ____

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
1657	2.5	7.87	72.3	7.47×10^2	CLEAR	
1705	5.0	7.81	68.3	7.51×10^2	OLIVE	
1712	7.5	7.65	67.2	7.49×10^2	OLIVE	
1718	10.0	7.69	66.7	8.24×10^2	OLIVE	

Odor? NONE

Actual Purge Vol. (gal.): ____

PURGE METHOD:
___ Bailer (Teflon)
X Bailer (PVC)
___ Well Wizard
___ Dedicated Bailer
___ Other ____

SAMPLE METHOD:
X Bailer (Teflon)
___ Bailer (PVC)
___ Dedicated Bailer
___ Other ____

REMARKS: SAMPLED @ 1751 ON 5/22/91

WEATHER: SUNNY ~ 66°

Appendix C

CHAIN-OF-CUSTODY RECORDS and CERTIFIED ANALYTICAL REPORTS

93164

Chain-of-Custody-Reco

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

Chevron Facility Number 9-8139
Facility Address 16304 Foothill Blvd., San Leandro
Consultant Project Number 1297
Consultant Name CHEMPRO
Address 950-B Gilman St., Berkeley, CA.
Project Contact (Name) Felicia A Rein
(Phone) 524-9372 (Fax Number) 524-7439

Chevron Contact (Name) Walt Poslusny
(Phone) 842-9527
Laboratory Name Superior
Laboratory Release Number 4758680
Samples Collected by (Name) Daryl A. Lamb / V. Rivier
Collection Date 5/22/91
Signature

Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Chlorinated HC (8010)	Non Chlorinated HC (8020)	Total Lead (AA)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	Remarks
TB-4-SL	1	W	G	700	HCL	Y	X							5/22/91
RS-4-SL	3	W	G	1000	HCL	Y	X							5/22/91
WS-26-SL	3	W	G	1311	HCL	Y	X							"
WS-27-SL	3	W	G	1332	HCL	Y	X							"
WS-28-SL	3	W	G	1428	HCL	Y	X							"
WS-29-SL	3	W	G	1445	HCL	Y	X							"
WS-30-SL	3	W	G	1530	HCL	Y	X							"
WS-31-SL	3	W	G	1541	HCL	Y	X							"
WS-32-SL	3	W	G	1630	HCL	Y	X							"
WS-33-SL	3	W	G	1751	HCL	Y	X							"

Please initial:
Samples stored on ice
Appropriate containers
Samples preserved
VOA's without headspace
Comments:

Analyses To Be Performed

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Steve Madsen	CHEMPRO	5/23/91 11:40 am	Ken Brown	Express H	5/23 1145
Relinquished By (Signature) Ken Brown	Organization Express H	Date/Time 5/23 1254	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature) F Tamanaha		Date/Time 5-23-91 1730

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
~~10 Days~~
As Contracted

COC-1.DWG/11 80/HCH

CHV 149

SUPERIOR ANALYTICAL LABORATORIES, INC.

825 ARNOLD, STE. 114 • MARTINEZ, CALIFORNIA 94553 • (415) 229-1512

DOHS #319
DOHS #220

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 83164
CLIENT: Chempro
CLIENT JOB NO.: 1297

DATE RECEIVED: 05/23/91
DATE REPORTED: 05/30/91

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
83164- 1	TB.4.SL	05/22/91	05/30/91
83164- 2	RS.4.SL	05/22/91	05/30/91
83164- 3	WS.26.SL	05/22/91	05/30/91
83164- 4	WS.27.SL	05/22/91	05/30/91
83164- 5	WS.28.SL	05/22/91	05/30/91
83164- 6	WS.29.SL	05/22/91	05/30/91
83164- 7	WS.30.SL	05/22/91	05/30/91
83164- 8	WS.31.SL	05/22/91	05/30/91
83164- 9	WS.32.SL	05/22/91	05/30/91
83164-10	WS.33.SL	05/22/91	05/30/91

Laboratory Number:	83164 1	83164 2	83164 3	83164 4	83164 5
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	ND<50	ND<50	ND<50	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
TOLUENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
ETHYL BENZENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
XYLENES:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5

Laboratory Number:	83164 6	83164 7	83164 8	83164 9	83164 10
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	28000	9800	7200	ND<50	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	5800	580	520	0.5	0.6
TOLUENE:	1200	140	130	0.7	ND<0.5
ETHYL BENZENE:	460	310	270	ND<0.5	ND<0.5
XYLENES:	2300	740	670	1.1	1.0

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C E R T I F I C A T E O F A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

QA/QC INFORMATION
SET: 83164

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
ug/l = part per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 503E:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA-SW846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/l
Standard Reference: NA

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/l
Standard Reference: 03/28/91

SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/l
Standard Reference: 01/18/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	03/28/91	200 ng	91	1	70-130
Benzene	01/18/91	200 ng	111	0	70-130
Toluene	01/18/91	200 ng	104	0	70-130
Ethyl Benzene	01/18/91	200 ng	100	0	70-130
Total Xylene	01/18/91	200 ng	103	1	70-130

Richard Srna, Ph.D.
Laboratory Director